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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/009,330	12/03/2001	Hitoshi Kikutani	46342/56,721	3836

7590 07/27/2004

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EXAMINER	
OUSPENSKI, ILIA I	

ART UNIT	PAPER NUMBER
1644	

DATE MAILED: 07/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/009,330	KIKUTANI ET AL.	
	Examiner	Art Unit	
	ILIA OUSPENSKI	1644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-22 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) 1-22 are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1 – 16 are pending.

Sequence Compliance

2. The instant application appears to be in sequence compliance for patent applications containing nucleotide sequence and/or amino acid sequence disclosures.

Restriction Requirement

3. The following is noted:

Claim 3 includes recitation of compounds that "change" the binding between CD100 and CD72. The compounds that either decrease or increase the binding differ in their structural properties and mechanism of action; therefore, the claims have been limited to either compounds that decrease the binding or compounds that increase the binding between CD100 and CD72, irrespective of the format of the claims.

Claim 4 includes recitation of compounds that promote or inhibit the activity of CD100. These types of compounds differ in their structural properties and mechanism of action; therefore, the restriction has been set forth for each type of compounds as separate groups, irrespective of the format of the claims.

4. It is noted that in the absence of recitation to the contrary, it is assumed for the purposes of examination that an increase in the binding of CD100 and CD72 is synonymous with an increase in CD100 activity, and a decrease in the binding of CD100 and CD72 is synonymous with a decrease in CD100 activity.

5. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in response to this action, to elect a single invention to which the claims must be restricted:

I. Claims 1 and 8, drawn to a screening method for compounds that change binding between CD100 and CD72.

II. Claim 2, drawn to a screening kit for compounds that change binding between CD100 and CD72.

III. Claims 3 – 7, drawn to compounds that increase the binding between CD100 and CD72, and pharmaceuticals that contain these compounds.

IV. Claims 3 – 7, drawn to compounds that decrease the binding between CD100 and CD72, and pharmaceuticals that contain these compounds.

V. Claim 9, drawn to nonhuman animals with loss of T cell reactivity and knockout of the CD100 gene.

VI. Claim 10, drawn to a screening method for preventives or remedies for diseases by using animals with CD100 knockout.

VII. Claims 11 and 12, drawn to a screening method for compounds that change binding between CD100 and receptors by using animals with CD100 knockout.

VIII. Claim 13, drawn to transgenic nonhuman animals with enhanced T cell reactivity and an exogenous CD100 gene.

IX. Claim 14, drawn to a screening method for preventives or remedies for diseases by using CD100 transgenic animals.

X. Claims 15 and 16, drawn to a screening method for compounds that change the binding between CD100 and receptors by using CD100 transgenic animals.

6. The inventions listed as Groups I-X do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The Invention of Group IV was found to have no special technical feature that defined the contribution over the prior art of Furuyama et al. (J. Biol. Chem., 1996, 271:33376-33381).

Furuyama et al teach the sequence of Semaphorin 4D, which is identical to CD100 claimed in the instant application. Exogenous CD100 can be used to block binding between endogenous CD100 and CD72. Therefore, claim 3 is anticipated by Furuyama et al.

Since Applicant's Inventions do not contribute a special technical feature when viewed over the prior art they do not have a single general inventive concept and so lack unity of invention.

Species Election

7. Claim 3 (Inventions III and IV) recites "compounds" that change binding between CD100 and CD72, whereas specification at least on page 22 discloses compounds such as peptides, proteins, nonpeptidic compounds, synthetic compounds and fermentation products. In the event that an Invention of this group is elected and

specific classes of compounds are introduced into the claims during prosecution, additional species election will be required.

8. Applicant is advised that the response to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed.

9. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 C.F.R. § 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a diligently-filed petition under 37 C.F.R. § 1.48(b) and by the fee required under 37 C.F.R. § 1.17(h).

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ILIA OUSPENSKI whose telephone number is 571-272-2920. The examiner can normally be reached on Monday-Friday 9 - 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Chan can be reached on 571-272-0841. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ILIA OUSPENSKI

Patent Examiner
Art Unit 1644

July 21, 2004

PHILLIP GAMBEL, PH.D
PRIMARY EXAMINER
TECH CENTER 1600
7/21/04